



**NORTHERN  
CAREER  
INSTITUTE**

# **MEDICAL BILLING & CODING CURRICULUM**

**MEDICAL BILLING AND CODING SPECIALIST PROGRAM**  
**With ELECTRONIC HEALTH RECORD**

**OBJECTIVES**

The Northern Career Institute Medical Billing and Coding Specialist Program student will be prepared to:

1. Acquire a strong foundation of knowledge related to medical terminology and anatomy and physiology.
2. Understand the importance of law and ethics in the healthcare field, with an emphasis on HIPAA.
3. Recognize the association between the delivery of healthcare services and the need to appropriately secure reimbursement.
4. Demonstrate an ability to use the electronic health record and other medical software programs to perform billing and coding duties efficiently.
5. Transfer diagnostic and procedure coding knowledge to electronic and/or paper claim forms.
6. Participate in a 180 hour externship program, on-site at a facility, to further gain knowledge and actual work experience.

**COURSE DESCRIPTIONS**

**Medical Terminology**

This is an introductory course in medical terminology. The course focuses on accurate spelling and pronunciation of terms and building knowledge of basic medical vocabulary with an emphasis on prefixes, suffixes, roots, and combining vowels. Anatomical, physiological, and pathological terminology are covered. Terminology related to the body systems is discussed.

**A. Course Learning Goals**

Students will

1. identify and define the word parts most frequently associated with the major body systems;
2. define, spell and pronounce medical terms associated with each of the major body systems;
3. define unfamiliar medical terms by analyzing their word parts and verifying the definitions in a dictionary; and
4. use the Internet to locate valid factual information about specific medical conditions.

**B. Planned Sequence of Topics and/or Learning Activities**

1. introduction to medical terminology
2. the human body in health and disease
3. the skeletal system
4. the muscular system
5. the cardiovascular system

6. the lymphatic and immune systems
7. the respiratory system
8. the digestive system
9. the urinary system
10. the nervous system
11. special senses: the eyes and ears
12. skin: the integumentary system
13. the endocrine system
14. the reproductive systems
15. diagnostic procedures and pharmacology

C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, quizzes, and written exams.

**Anatomy and Physiology, Diseases and Conditions**

This course introduces the study of the human body and the basic structure of cells, tissues, and organs. Topics include the structure and function of the integumentary, muscular, nervous, and skeletal systems.

A. Course Learning Goals

Students will:

1. describe the detailed structure of the human body; and explain the function and relationship of the various cells, tissues, organs, and systems of the human body.

B. Planned Sequence of Topics and/or Learning Activities

Topics to be presented:

1. body plan and organization
2. homeostasis
3. cell and molecular chemistry
4. cell biology
5. histology
6. integumentary system
7. skeletal system
8. muscular system
9. nervous tissue

## 10. spinal cord

### C. Assessment Methods for Course Learning Goals

Evaluative tools, as specified by the individual instructor's course format, can include any or all of the following: objective examinations, laboratory exams, class participation, laboratory reports, on-line activities and discussion, quizzes, and projects or papers.

This course is designed to meet the needs of medical coding professionals for the increased specificity associated with ICD-10. Advanced anatomy and physiology is required to understand the upgraded coding requirements and apply it to common medical diseases, disorders, injuries, and conditions.

### A. Course Learning Goals

Students will:

1. identify externally significant anatomical structures, organs, organ systems;
2. understand the relationships between functionally united anatomical structures;
3. understand externally significant physiological processes;
4. identify and understand the diseases, disorders, injuries, and conditions of various body systems; and
5. apply the history, signs, symptoms, imaging, exam findings, treatments, and prognoses of various diseases, disorders, injuries, and conditions of the human body
6. understand and apply medical and anatomical terminology;

### B. Planned Sequence of Topics and/or Learning Activities

1. blood and blood forming organs
2. endocrine system
3. nervous system
4. eye and adnexa
5. ear and mastoid process
6. circulatory system
7. respiratory system
8. digestive system
9. integumentary system (skin)
10. musculoskeletal system
11. genitourinary system

### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on online discussions, objective examinations, assignments, papers, and/or performance-based tasks and projects.

### **Healthcare Law and Ethics**

This course covers concepts and principles of law found in the healthcare field. The course focuses on legal issues regarding health information, including confidentiality, release of health information, consent forms, liability of healthcare providers, concepts and methods of risk management in the healthcare field, and other current medical/legal issues.

#### A. Course Learning Goals

Students will:

1. demonstrate an understanding of HIPAA regulations;
2. demonstrate an understanding of privacy, security, confidentiality, legal policies and procedures, and ethical issues;
3. demonstrate an understanding of legal principles impacting Health Information Technology; and
4. identify the role of the health information professional in legal healthcare compliance.

#### B. Planned Sequence of Topics and/or Learning Activities

1. historical perspective
2. introduction to law
3. tort law
4. criminal aspects of healthcare
5. contracts and antitrust
6. civil procedure and trial practice
7. corporate structure and liability
8. medical staff
9. health information and the law
10. liability for healthcare professionals
11. information management and healthcare records
12. patient consent
13. legal reporting requirements
14. patient rights and responsibilities
15. acquired immune deficiency syndrome
16. healthcare ethics
17. professional liability insurance

18. managed care and organizational restructuring
19. tort reform and risk reduction
20. patient safety and zero tolerance

#### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

#### **HIPAA Law**

This course is an introduction to the concepts of medical law and ethics for health care practitioners. Topics including criminal and civil acts, contracts, negligence, and ethical concepts as they relate to the medical profession will be covered. Managed care, HIPAA, and other health care legislative rulings are discussed.

#### A. Course Learning Goals

Students will:

1. demonstrate an understanding of legal issues dealing with the law, intentional and quasi-intentional torts, professional liability insurance, informed consent issues, and documentation;
2. demonstrate an understanding of ethical issues in health occupations;
3. demonstrate an understanding of common areas of liability and litigation that include administrative and medical records, laboratory, medical equipment, patient care, and conflict management; and
4. demonstrate an understanding of managed care and HIPAA regulation in the medical office.

#### B. Planned Sequence of Topics and/or Learning Activities

1. legal issues with law
2. intentional and quasi-intentional torts
3. professional liability insurance
4. informed consent issues
5. documentation and the allied health professional
6. legal and ethical issues affecting educators and students
7. ethical issues in health occupations
8. administrative and medical record liability and litigation
9. externship laboratory liability
10. medical equipment liability and litigation

11. patient care liability and litigation
12. conflict management and the healthcare provider

C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

**Billing Concepts, Policies and Procedures for the Physician Office and in the Hospital Setting**

This course covers health insurance products and managed care approaches to the financing and delivery of healthcare services. Students explore reimbursement and payment methodologies. Students examine forms, processes, practices, and the roles of health information professionals. Students discuss concepts in insurance, third-party and prospective payments, and managed care organizations.

A. Course Learning Goals

Students will:

1. identify and comprehend medical insurance products and services and the impact they have on the healthcare delivery system;
2. demonstrate an understanding of the role of healthcare providers, insurers, and integrated delivery systems in the medical insurance marketplace;
3. demonstrate an understanding of pay for performance systems and the Centers for Medicare and Medicaid Services model; and
4. demonstrate an understanding of the basics of health insurance, public funding programs, managed care contracting, and how services are paid.

B. Planned Sequence of Topics and/or Learning Activities

1. systems used for reimbursement of healthcare services
2. the role of government in healthcare services
3. historical development of healthcare reimbursement in the United States.
4. current processes, forms, and support practices for healthcare reimbursement
5. government-sponsored health programs
6. Centers for Medicare and Medicaid Services
7. prospective reimbursement system
8. revenue cycle management
9. diagnosis-related group (DRG)
10. proper sequencing of codes
11. major diagnostic category (MDC)

12. case mix index (CMI)
13. UB-92
14. resource-based relative value system
15. outpatient prospective payment system
16. resource utilization groups (RUGs)
17. prospective payment methodology for reimbursement of ambulatory surgery
18. federal fraud and abuse legislation and corporate compliance
19. chargemaster

#### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

#### **Diagnostic and Procedural Coding**

The ICD-10-CM coding system is practiced. Content and purposes of disease and procedure indexes are reviewed, as well as the purposes of abstracting from patient medical records. Implications of DRGs and their relationship to coding assignments and financing of hospital care are examined. Tumor registries are discussed.

#### A. Course Learning Goals

Students will:

1. demonstrate an understanding of ICD-10-CM coding techniques by utilizing the alphabetic and tabular structures of Volumes 1 and 2 of the ICD-10-CM coding manual;
2. identify both principal and secondary ICD-10-CM diagnoses;
3. identify both principal and secondary ICD-10-CM procedures; and
4. identify and explain the major coding issues and concerns for different diseases, disorders, organs, systems, tissues, surgery, injuries, burns, etc., by using an ICD-10-CM Coding Manual and an ICD-10-CM Coding Handbook.

#### B. Planned Sequence of Topics and/or Learning Activities

1. diseases of the genitourinary system
2. diseases of the skin and subcutaneous tissue
3. disease of the musculoskeletal system and connective tissue
4. endocrine, nutritional, and metabolic diseases and immunity disorders
5. mental disorders
6. diseases of the nervous system and sense organs
7. complications of pregnancy, childbirth, and the puerperium

8. abortion and ectopic pregnancy
9. congenital anomalies
10. perinatal conditions
11. diseases of the circulatory system
12. neoplasms
13. injuries
14. burns
15. poisoning and adverse effects of drugs
16. complications of surgery and medical care
17. DRG overview
18. ICD-10
19. strengthen understanding of relevant terminology

#### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

This advanced course covers Current Procedural Terminology (CPT), International Classification of Diseases (ICD-9 Volume 3), Health Care Procedural Coding Systems (HCPCS), modifier applications, evaluation and management services, and coding issues for specific body systems.

#### A. Course Learning Goals

Students will:

1. analyze the externship situation and determine what diagnosis(es) should be linked with what procedure(s) and which procedure should be coded by applying official professional coding guidelines or the outpatient coding guidelines as appropriate;
2. apply general guidelines and identify the structure for using the HCPCS Levels I, II, and III coding system;
3. discuss the use of and apply correct modifiers in the HCPCS Levels I, II, and III coding systems; and
4. demonstrate an understanding of the correct coding initiative for ICD-9-CM procedure codes, Volume 3.

#### B. Planned Sequence of Topics and/or Learning Activities

1. sequencing -- principle diagnosis and procedure determination and secondary/additional diagnosis and procedures determination

2. principles for outpatient and inpatient coding
3. HCPCS Levels I, II and III
4. strengthening the understanding of relevant medical terminology

#### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

#### **Computers in the Medical Office**

This course is an introduction to healthcare delivery systems with emphasis on organizational compliance, structure and accreditation, licensing and/or certification with regulatory agencies. This course covers revenue cycle management, claims management, and bill reconciliation processes. Topics include chargemaster maintenance and health data classification.

#### A. Course Learning Goals

Students will:

1. identify the regulators of healthcare, including government and non-government entities;
2. demonstrate an understanding of the role of the federal, state, and local governments in the provision of healthcare;
3. analyze Health Information Technology systems in terms of their support of organizational operations;
4. describe the content of the acute care medical record and its relationship to the development of the organization-wide information management plan;
5. abstract medical records using the Uniform Hospital Discharge Data Set guidelines; and
6. analyze medical records to determine if all state and federal guidelines are adhered.

#### B. Planned Sequence of Topics and/or Learning Activities

1. functions of the health record
2. content and structure of the health record
3. electronic health records
4. healthcare data sets
5. externship vocabularies and classification systems
6. reimbursement methodologies
7. health information technology functions
8. secondary data sources
9. healthcare statistics
10. externship quality management

11. healthcare delivery systems
12. ethical issues in health information technology
13. principles of work planning and organizations
14. chargemaster maintenance

C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

**Medical Software Programs**

This course covers the concepts of computer applications related to healthcare. This course discusses healthcare data sets, health information specialty systems, document archival, retrieval and imaging systems, and data storage systems. Students demonstrate an understanding of various health information software applications coding tasks.

A. Course Learning Goals

Students will:

1. identify methods to collect and maintain health data;
2. demonstrate an understanding of the emerging activities at the federal, state, and regional level towards a national electronic health record;
3. describe how various primary and secondary data sets are used in healthcare settings;
4. identify and demonstrate proficiency in the various applications utilized in a healthcare setting and perform practice exercises; and
5. demonstrate an understanding of the importance of data quality, entry, and integrity.

B. Planned Sequence of Topics and/or Learning Activities

1. history and influence of computers in healthcare
2. privacy, confidentiality, integrity, and security of electronic data
3. electronic health records
4. security measures
5. hardware and software in data collection, storage, analysis, and reporting
6. software applications used with the Electronic Health Record
7. spreadsheets
8. databases
9. electronic communication
10. data quality, entry, integrity, and reliability
11. computer assisted communication

## 12. healthcare informatics

### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance-based tasks and projects.

### **Medical Coding**

This course covers principles of the International Classification of Diseases Coding Modifiers (ICD-10-CM), Current Procedural Terminology (CPT), and third party reimbursement. Students are provided with the fundamentals of a classification coding system used in health care industries.

### A. Course Learning Goals

Students will

1. demonstrate an understanding of CPT coding techniques; and
2. demonstrate an understanding of the alphabetic and tabular structures of Volumes 1 and 2 of the ICD-10-CM coding manual.

### B. Planned Sequence of Topics and/or Learning Activities

1. introduction to current procedural terminology (CPT) and HCPCS codes
2. introduction to ICD-10-CM codes
3. evaluation and management
4. anesthesia and surgery
5. radiology and pathology/laboratory
6. medicine
7. coding guidelines
8. third-party reimbursement

### C. Assessment Methods for Course Learning Goals

The assessment of course learning goals will be based on classroom discussions, written exams, assignments, papers, and/or performance based tasks and projects.

### **Medical Office Administration**

This course examines the role and function of the medical professional. Topics including patient education, compliance with HIPAA, and relationships with health care providers are covered. Students are introduced to the latest in financial procedures, financial management concepts, and communication technology and skills essential in preparing them for today's job market.

#### A. Course Learning Goals

Students will:

1. demonstrate an understanding of the role of the health care worker while performing administrative duties;
2. perform basic bookkeeping
3. demonstrate an understanding of procedural and diagnostic coding while using computer simulation software; and
4. perform office operational functions.

#### B. Planned Sequence of Topics and/or Learning Activities

1. professional and career responsibilities
2. interpersonal communication
3. written communication
4. financial administration
5. managing the medical office
6. career opportunities

#### C. Assessment Methods for Course Learning Goals

Students will be assessed by quizzes, tests, in-class activities, office related simulations, and article summaries.

**Professionalism in Healthcare – integrated into curriculum**

**Employment and Career Readiness– integrated into curriculum**

**Electronic Health Record– integrated into curriculum**